

**WIRELESS COMMUNICATIONS  
DEVICE PSEUDO-FRACTAL ANTENNA**

**ABSTRACT OF THE INVENTION**

- 5                   A pseudo-fractal antenna is provided comprising a dielectric, and a radiator proximate to the dielectric having an effective electrical length formed in a pseudo-fractal geometry. That is, the radiator includes at least one section formed in a fractal geometry and at least one section formed in a non-fractal geometry.
- 10   The antenna can be either a monopole or a dipole antenna. For use in a wireless communication telephone, the antenna operating frequency can be approximately 1575 megahertz (MHz), to receive global positioning satellite (GPS) information. In one aspect, the radiator has a fractal geometry section formed as a Koch curve. When
- 15   the antenna is a dipole, the counterpoise can also be a pseudo-fractal geometry with a section formed in Koch curve fractal geometry section. The radiator can be a conductor embedded in the dielectric. Alternately, the radiator is a conductive line overlying a dielectric layer.